

pore distribution: no pores < 5 nm, only meso- and macro-pores are present,  
pH value: from 3.6 to 8.5,  
tamped density: from 220 to 700 g/l.

2. (Amended) The sintered material according to claim 1, wherein the granulates are processed to the sintered material by means of a process comprising:

*B1*

- a1) preparing a dispersion of granulates having a solids content of from 10 wt.% to 85 wt.%, and a polar or non-polar inorganic or organic liquid,
- a2) transferring the dispersion into a form or coating of surfaces with the dispersion,
- a3) initiating gelling of the dispersion and drying of a gel-body or gel-body coating and drying the gel body or gel-body coating to form a green body or green-body coating;
- a4) optionally cleaning the green body obtained after the drying operation, or the green-body coating, with gaseous substances, at temperatures of from 700 to 1000°C and
- a5) sintering at a temperature of from 1000 to 1800°C, wherein a resulting sintered body or sintered surface is fully dense-sintered or is still partially porous.

3. (Amended) The sintered material according to claim 1, wherein the granulates are processed to the sintered material by means of a process comprising:

- b1) introducing the granulates without aid of a liquid, into a form or application of the granulates to a surface, to provide a formed body or a layer,
- b2) optionally, further compacting, wherein the formed body or the layer is pressed under a high external mechanical pressure at atmospheric pressure or at

reduced pressure, wherein the formed body obtained after the pressing step, or the compacted coating, can optionally be cleaned with gaseous substances, at temperatures of from 700 °C to 1000 °C and sintered by means of a sintering step at a temperature of from 1000 °C to 1800°C, wherein a resulting sintered body or sintered surface is fully dense-sintered or is still partially porous.

*b1*

4. (Amended) The sintered material according to claim 1, wherein the granulates are processed to the sintered material by means of a process comprising: applying the granulates to formed bodies or surfaces by thermal or other high energy processes, in which a solid formed body or a solid coating is obtained and sintered so that the resulting sintered body or sintered surface is fully dense-sintered or is still partially porous.

5. (Amended) A sintered material according to claim 1, wherein during production thereof, the granulates, by action of thermal, electric or electromagnetic energy, are brought into a form before or after heating and are then sintered so that a resulting sintered body or sintered surface is fully dense-sintered or is still partially porous, or the granulates are melted partially or completely, and formed before or after heating to solidify in a form or as a coating, and optionally after-treated.

*b2*

8. (Amended) The sintered material according to claim 1, wherein the sintered material comprises a glass and properties of the glass sintered or melted from corresponding very fine powder particles correspond to properties of a glass having an identical chemical composition that has been produced via a conventional melting process without using said compacted granulates, wherein production of said sintered

*b2*  
*cont*

material requires substantially lower sintering temperatures as compared with the melting temperature required to produce the glass having an identical composition that has been produced via the conventional melting process.

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Please add the following new claim(s):

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*b3*

23. (New) The sintered material according to claim 2, wherein step a4) comprises cleaning the green-body obtained after the drying operation or the green-body coating, with gaseous chlorine or thionyl at a temperature of from 700 °C to 1000 °C.

24. (New) The sintered material according to claim 3, wherein step b2) includes cleaning the formed body obtained after the pressing step or the compacted coating, with gaseous chlorine or thionyl at a temperature of from 700 °C to 1000 °C.

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